

CLAIMS:

1. A system for dispensing pill- or capsule-form medications (61) in desired doses (60), said system comprising a dispensing device (35) which includes
 - a housing or frame (10),
 - a cartridge (20, 40) rotatably supported on the housing or frame (10) and provided with individual dosage compartments (27, 47) for desired doses of medication, the cartridge (20, 40) being adapted to be disengageable and removable from the dispensing device (35) for filling the dosage compartments (27, 47) of the cartridge with desired doses of medication, the cartridge being furnished with identification data (ID), on the basis of which the filled cartridge (20, 40) can be certifiably returned to the proper dispensing device (35),
 - a signaling device (75, 76) giving a sound and/or light signal, which activates at pre-programmed points of time, and
 - an electronics unit (19, 55) containing a dispensing program,
 the program electronics (19) being re-programmable with a programming device (55, 56; 36, 66, 101, 102) and that the dispensing is arranged to be effected by means of the users own action which is exerted onto the dispensing device (35), **characterized** in that the users own action for dispensing rotates or controls, rotation of the cartridge (20, 40) to bring an individual dosage compartment (27, 47) into a dispensing position, and that the said users own action for dispensing, or lack of such action within a prescribed time, is adapted to automatically transmit information regarding the dispensing event by way of a communication link (62, 63) to a distant control file (64a), which can be accessed and monitored by persons having a correct key code or password.

2. A system as set forth in claim 1, **characterized** in that the cartridge (20) is furnished with a rotatable and removable cover (28) having an opening (28a) which can be rotated to coincide with any of the dosage compartments (27) for loading and/or dispensing of doses through the opening (28a), and that the

cartridge is further provided by means (90, 91) for visual indication of dispensing schedule.

3. A system as set forth in claim 1, **characterized** in that the system includes a separate dosing or loading device (80, 80') for filling the dosage compartments (27, 47) of the cartridge with desired doses of medication and for furnishing the filled cartridge (20, 40) with identification data (ID).

4. A system as set forth in claim 1, **characterized** in that the programming device (36, 66, 101, 102) is an external portable device, which has a wireless communication link (37, 138) with the electronics unit (19, 55) of the dispensing device (35).

5. A system as set forth in claim 3, **characterized** in that the prescription controlling the loading device (80) in terms of its filling action is adapted to be delivered, along with a patient's identification data, by way of a communication network, such as the internet or a chip card (68), to a computer (67) controlling operation of the loading device (80).

6. A system as set forth in claim 1, **characterized** in that the dispensing device (35) is provided with a transmitter, such as a GSM module (62), which is adapted to transmit automatically information regarding dispensing occurrences by way of a communication link (63) to a predetermined control file (64a) at a distant control terminal (64, 66), which is provided by a program for monitoring the dispensing events saved in the control file (64a).

7. A system as set forth in claim 1, **characterized** in that the control file (64a) is linked to the internet (65) in such a way that the control file (64a) can be monitored via the internet, as long as a password associated with the control file (64a) is known.

8. A system as set forth in claim 4, **characterized** in that the external programming device (36, 66, 101, 102) for a dispensing program comprises either a mobile telephone (36) or a programming device (101, 102) equipped with an IR link (37, 38, 138) for feeding the dispensing program, or modifications thereto to the electronics unit (19, 55).

9. A system as set forth in claim 4, **characterized** in that the external programming device (36, 66, 101, 102) for a dispensing program comprises a computer (66), which has a link via the internet (65) to the control file (64a) or which has the control file stored in its bulk memory.

10. A system as set forth in claim 3, **characterized** in that the loading device (80, 80') is adapted to provide the cartridge (20, 40) with an optically readable label (ID) disclosing the identification data.

11. A system as set forth in claim 3, **characterized** in that the cartridge (20) carries an electronic identification tag (39), which the loading device (80, 80') furnishes with identification data for a customer, and that the dispensing device (35) or a hospital dispensary is provided with elements (39a; 102/139) for reading the data disclosed in the identification tag (39).

12. A system as set forth in claim 1, **characterized** in that the means (18, 18a) for manipulating the cartridge (20) are activated to function upon pressing a push button (3), but only after the signalling device (75, 76) has activated under control of the program of the electronics unit (19, 55).

13. A system as set forth in claim 1, **characterized** in that, upon every activation of the means (18, 18a) manipulating the cartridge (20), the information about a dispensing occurrence is transmitted to said control file (64a), which compiles a monitoring log of taking a medication.

14. A system as set forth in claim 1, **characterized** in that the electronics unit (19, 55) involves a memory which collects information regarding dispensing occurrences and transmits the same at prescribed times to said control file (64a), which compiles a monitoring log of taking a medication, the prescribed times being short enough for practically real time monitoring of taking a medication.
15. A system as set forth in claim 1, **characterized** in that the electronics unit (19, 55) containing a dispensing program is programmable by means of push buttons (56) included therein.
16. A system as set forth in claim 1, **characterized** in that between the dosage compartments (27) of the cartridge (20) is a vacant recess or space (23) and the housing or frame (10) of the dispensing device is provided with a protrusion, which functions as a response and/or an indication for inserting the cartridge (20) in the housing or frame (10) of a dispensing device in a preset initial position.
17. A system as set forth in claim 1, **characterized** in that the cartridge (20, 30 and 40, 50) includes a substantially circular base disc (30, 50), having radially inbound elongated cuts or slits (34, 54) provide its outer periphery with sector-shaped flexible flaps (31, 51) which constitute a floor for the dosage compartment (27, 47), and that in the vicinity of the dispensing point (12) are provided manually operated bending means (3, 7, 8a, 9a) for deflecting the flap (31, 51) to extend obliquely downwards from the plane of the base disc (30, 50) and for releasing the dose of medication (60) from the dosage compartment (27, 47).
18. A system as set forth in claim 1, **characterized** in that at least one cartridge (20, 40) is encloseable within a space (5) defined by a cover (2) mountable around the frame (10) and the cartridge (20, 30 and 40, 50).
19. A system as set forth in claim 18, **characterized** in that the cover (2) is lockable securely to the frame (10) by means of a common locking mechanism (16, 17; 69) between the cover (2) and the rim portion (13) of the frame (10).

20. A system as set forth in claim 1, **characterized** in that a stepping motor (18) rotates the cartridge (20, 30 and 40, 50) in compliance with a program programmed in a programmable memory of the electronics unit (19, 55).

21. A system as set forth in claim 1, **characterized** in that, with the base disc (30, 50) or the removable cover (28) set in its position, the dosage compartments (27, 47) are closed on all sides thereof.

22. A system as set forth in claim 1, **characterized** in that, the cartridges (20, 40) are made of transparent plastics and also the dispensing device is partially made of transparent plastics to allow visual inspection of the doses in the dosage compartments.

23. A system as set forth in claim 12, **characterized** in that a stepping motor (18) rotates the cartridge (20) through an angular distance equal to the dosage compartment (27) as the dispensing button (20) is pressed at the accepted medication time, which is programmed in the program of the electronics unit (19, 55).